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     (FILE 'HOME' ENTERED AT 22:53:03 ON 08 JUL 2004)

     FILE 'REGISTRY' ENTERED AT 22:53:09 ON 08 JUL 2004
L1                STRUCTURE UPLOADED
L2                STRUCTURE UPLOADED
L3                STRUCTURE UPLOADED
L4             129 S L1 FULL
L5              80 S L2 FULL
L6             528 S L3 FULL

     FILE 'CAPLUS' ENTERED AT 22:54:25 ON 08 JUL 2004
L7           34909 S PHOTORESIST OR RESIST COMPOSITION
L8               4 S L4 AND L7
L9               2 S L5 AND L7
L10              4 S L6 AND L7
L11              2 S L8 NOT L9
L12              0 S L9 NOT L8

=> s l10 not l8
L13              0 L10 NOT L8
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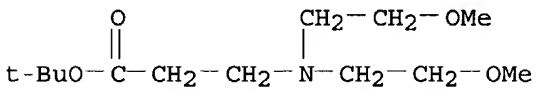
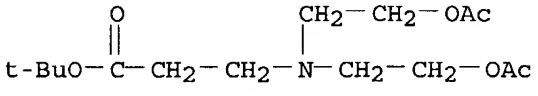
L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:955415 CAPLUS
DN 138:47300
TI Nitrogen-containing basic compound, resist material, and method of patterning
IN Hatakeyama, Jun; Watanabe, Takeshi; Nagata, Takashi; Maeda, Kazuki; Nishi, Tsunehiro
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2002363148 | A2 | 20021218 | JP 2001-164044 | 20010531 |
| PRAI JP 2001-164044 | | 20010531 | | |

OS MARPAT 138:47300
AB The N-containing basic compound is represented by (R2)bN(R1COOCRpRqRr)a (R1 = C1-4 alkylene; R2 = H, C1-20 alkyl; Rp, Rq, Rr = C1-20 hydrocarbon which may form ring; a = 1, 2, 3; b = o, 1, 2; and a + b = 3). The resist material containing the basic compound is also claimed. The patterning process using a high energy ray ≤300 nm or an electron beam is also claimed. An addition of the basic compound in the resist material provided a broader focus margin and a high contrast.
IT **478407-85-1P 478407-88-4P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(nitrogen-containing basic compound for resist material)
RN 478407-85-1 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 478407-88-4 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:831831 CAPLUS
DN 137:325160
TI Preparation of novel tertiary amine compounds having an ester structure as additives for chemical amplification resists
IN Watanabe, Takeru; Hasegawa, Koji; Kinsho, Takeshi; Hatakeyama, Jun
PA Shin-Etsu Chemical Co., Ltd., Japan
SO Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| PI | EP 1253138 | A2 | 20021030 | EP 2002-252827 | 20020423 |
| | EP 1253138 | A3 | 20030924 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2002193622 | A1 | 20021219 | US 2002-127120 | 20020422 |
| | JP 2003012621 | A2 | 20030115 | JP 2002-120468 | 20020423 |
| PRAI | JP 2001-123927 | A | 20010423 | | |

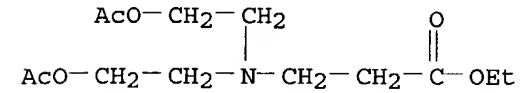
OS MARPAT 137:325160

AB The invention provides novel and useful ester group-containing tertiary amine compds. (R1OCH2CH2)nN(CH2CH2CO2R2)3-n [n is 1 or 2; R1, R2 = (cyclo)alkyl groups which may contain an ether, carbonyl or carbonyloxy group] which, when used as additives in chemical amplification photolithog., can yield photoresists having a high resolution and an excellent focus margin. Thus, a mixture of 10.5 g each Et acrylate and diethanolamine was allowed to stand 20 h at 20-30 °C, 25.6 g triethylamine, 100 mg 4-dimethylaminopyridine, 100 g THF, and 22.4 g of acetic anhydride were added and the mixture stirred for 10 h to afford 95 % (AcOCH2CH2)NCH2CH2CO2Et. The photoresists prepared by adding the ester group-containing tertiary amine compds. of the invention have a much wider focus margin, as compared with conventional photoresists.

IT **350684-62-7P 350684-66-1P 350684-69-4P**
**350684-73-0P 350684-75-2P 350684-79-6P**
**350684-80-9P 350684-81-0P 473713-58-5P**
**473713-59-6P 473713-60-9P 473713-61-0P**
**473713-62-1P 473713-64-3P 473713-65-4P**
**473713-67-6P 473713-68-7P 473713-69-8P**
**473713-70-1P 473713-71-2P 473713-72-3P**
**473713-73-4P 473713-74-5P 473713-75-6P**
**473713-76-7P 473713-77-8P 473713-78-9P**
**473713-79-0P 473713-80-3P 473713-81-4P**
**473713-82-5P 473713-83-6P 473713-84-7P**
**473713-85-8P 473713-86-9P 473713-87-0P**
**473713-89-2P 473713-90-5P 473713-91-6P**
**473713-92-7P 473713-93-8P 473713-94-9P**
**473713-95-0P 473713-96-1P 473713-97-2P**
**473713-98-3P 473713-99-4P 473714-00-0P**
**473714-01-1P 473714-02-2P 473714-25-9P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of acrylate-(di)ethanolamine adducts as additives for chemical amplification resists)

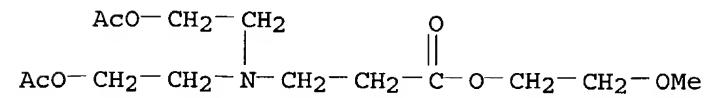
RN 350684-62-7 CAPLUS

CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 350684-66-1 CAPLUS

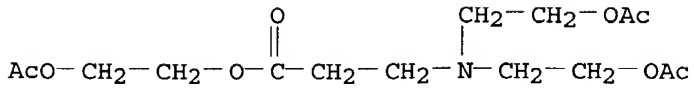
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



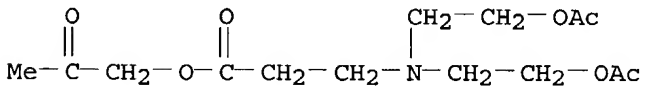
RN 350684-69-4 CAPLUS

CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-(acetyloxy)ethyl ester

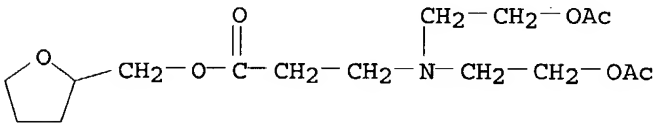
(9CI) (CA INDEX NAME)



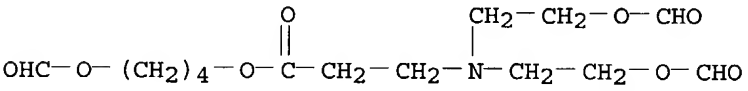
RN 350684-73-0 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-oxopropyl ester (9CI) (CA INDEX NAME)



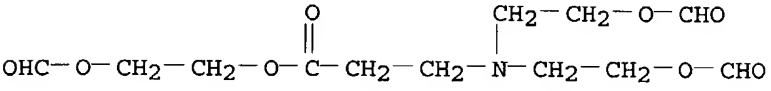
RN 350684-75-2 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, (tetrahydro-2-furanyl)methyl ester (9CI) (CA INDEX NAME)



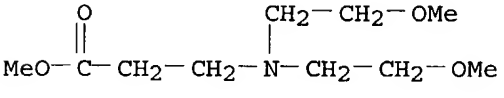
RN 350684-79-6 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, 4-(formyloxy)butyl ester (9CI) (CA INDEX NAME)



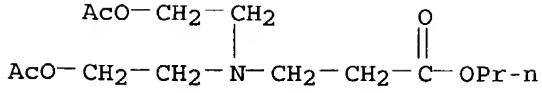
RN 350684-80-9 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, 2-(formyloxy)ethyl ester (9CI) (CA INDEX NAME)



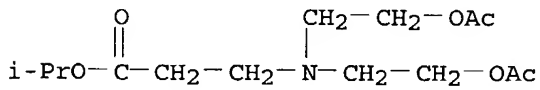
RN 350684-81-0 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, methyl ester (9CI) (CA INDEX NAME)



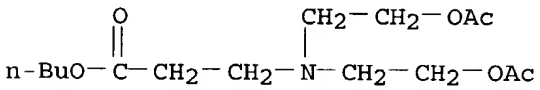
RN 473713-58-5 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, propyl ester (9CI) (CA INDEX NAME)



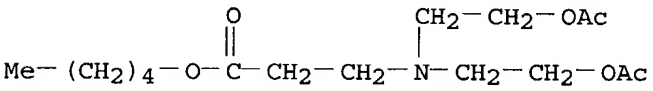
RN 473713-59-6 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 1-methylethyl ester (9CI) (CA INDEX NAME)



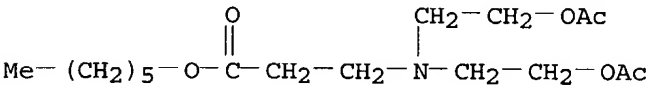
RN 473713-60-9 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, butyl ester (9CI) (CA INDEX NAME)



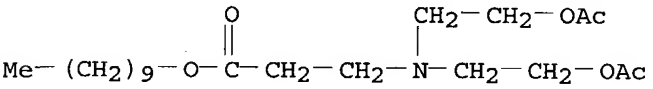
RN 473713-61-0 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, pentyl ester (9CI) (CA INDEX NAME)



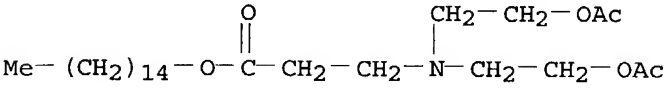
RN 473713-62-1 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, hexyl ester (9CI) (CA INDEX NAME)



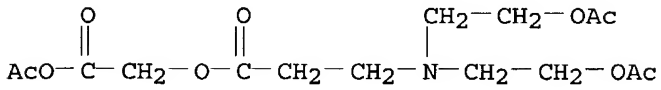
RN 473713-64-3 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, decyl ester (9CI) (CA INDEX NAME)



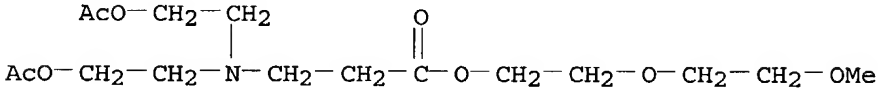
RN 473713-65-4 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, pentadecyl ester (9CI) (CA INDEX NAME)



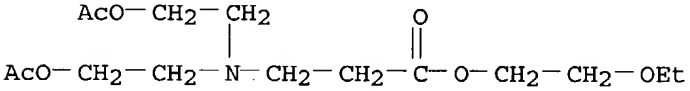
RN 473713-67-6 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-(acetyloxy)-2-oxoethyl ester (9CI) (CA INDEX NAME)



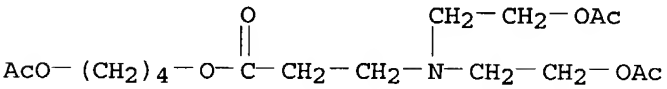
RN 473713-68-7 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-(2-methoxyethoxy)ethyl ester (9CI) (CA INDEX NAME)



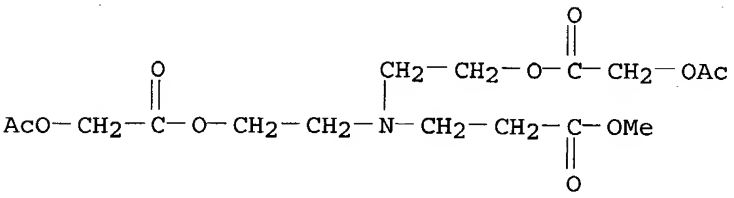
RN 473713-69-8 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-ethoxyethyl ester (9CI) (CA INDEX NAME)



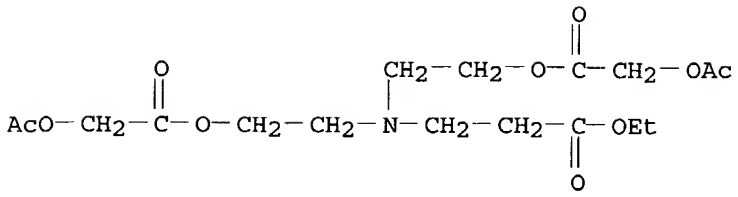
RN 473713-70-1 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 4-(acetyloxy)butyl ester (9CI) (CA INDEX NAME)



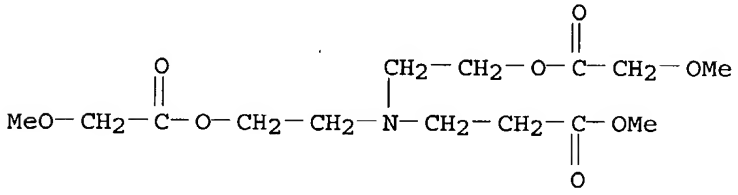
RN 473713-71-2 CAPLUS
CN β-Alanine, N,N-bis[2-[[(acetyloxy)acetyl]oxy]ethyl]-, methyl ester (9CI) (CA INDEX NAME)



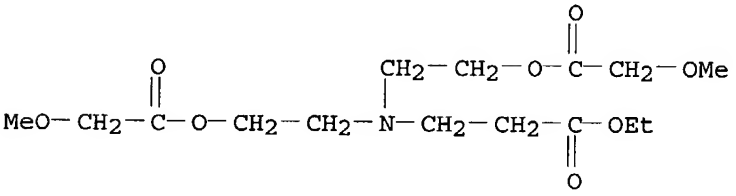
RN 473713-72-3 CAPLUS
CN β-Alanine, N,N-bis[2-[[(acetyloxy)acetyl]oxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



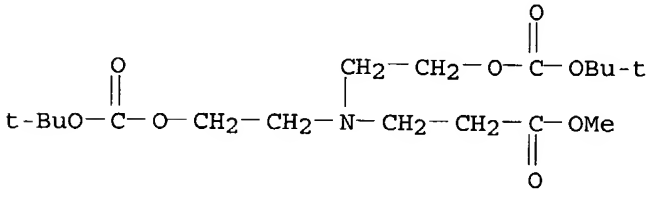
RN 473713-73-4 CAPLUS
CN β-Alanine, N,N-bis[2-[(methoxyacetyl)oxy]ethyl]-, methyl ester (9CI) (CA INDEX NAME)



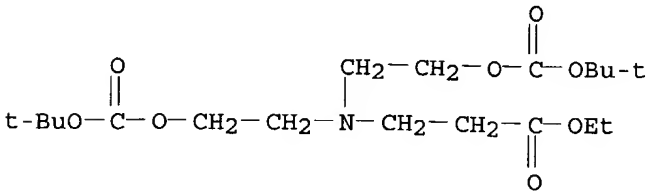
RN 473713-74-5 CAPLUS
CN β-Alanine, N,N-bis[2-[(methoxyacetyl)oxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



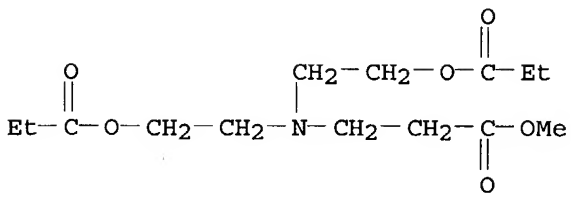
RN 473713-75-6 CAPLUS
CN 2,8,10-Trioxa-5-azadodecanoic acid, 5-(3-methoxy-3-oxopropyl)-11,11-dimethyl-9-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



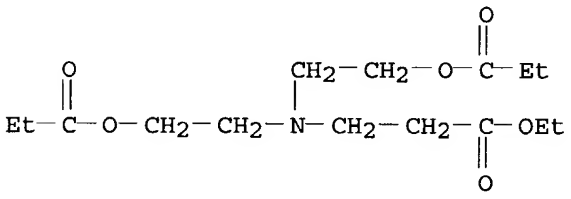
RN 473713-76-7 CAPLUS
CN 2,8,10-Trioxa-5-azadodecanoic acid, 5-(3-ethoxy-3-oxopropyl)-11,11-dimethyl-9-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



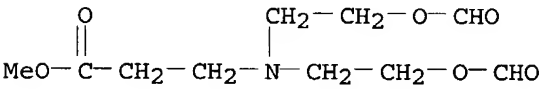
RN 473713-77-8 CAPLUS
CN β-Alanine, N,N-bis[2-(1-oxopropoxy)ethyl]-, methyl ester (9CI) (CA INDEX NAME)



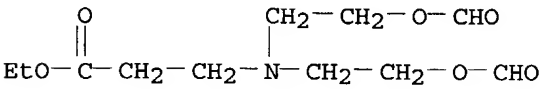
RN 473713-78-9 CAPLUS
CN β-Alanine, N,N-bis[2-(1-oxopropoxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



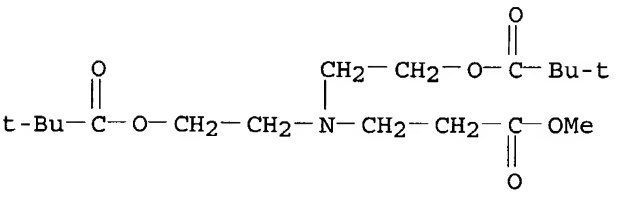
RN 473713-79-0 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 473713-80-3 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

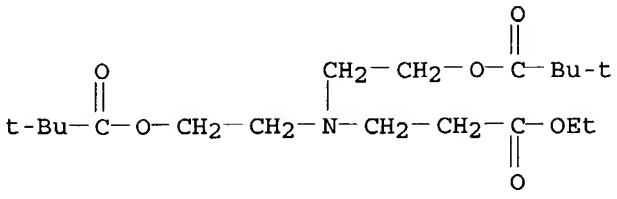


RN 473713-81-4 CAPLUS
CN β-Alanine, N,N-bis[2-(2,2-dimethyl-1-oxopropoxy)ethyl]-, methyl ester (9CI) (CA INDEX NAME)

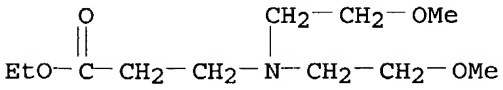


RN 473713-82-5 CAPLUS
CN β-Alanine, N,N-bis[2-(2,2-dimethyl-1-oxopropoxy)ethyl]-, ethyl ester

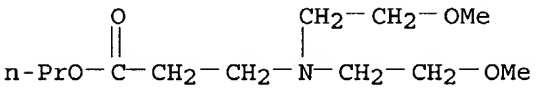
(9CI) (CA INDEX NAME)



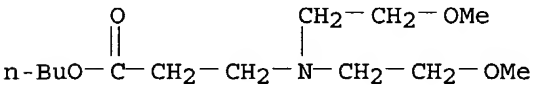
RN 473713-83-6 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)



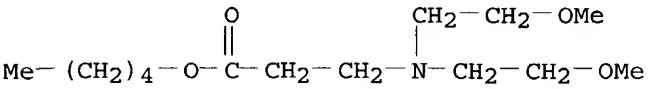
RN 473713-84-7 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, propyl ester (9CI) (CA INDEX NAME)



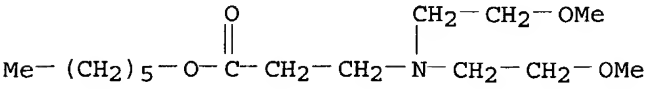
RN 473713-85-8 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, butyl ester (9CI) (CA INDEX NAME)



RN 473713-86-9 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, pentyl ester (9CI) (CA INDEX NAME)

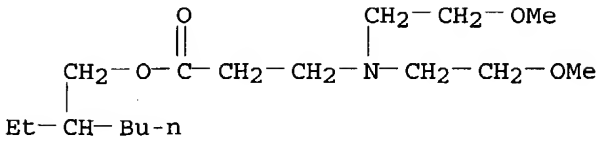


RN 473713-87-0 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, hexyl ester (9CI) (CA INDEX NAME)

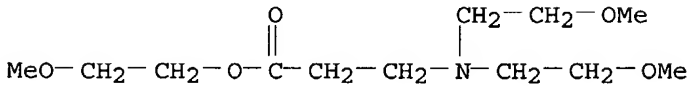


RN 473713-89-2 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-ethylhexyl ester (9CI) (CA

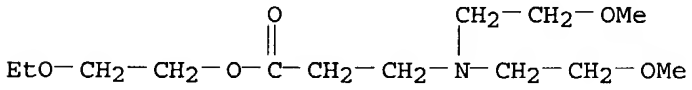
INDEX NAME)



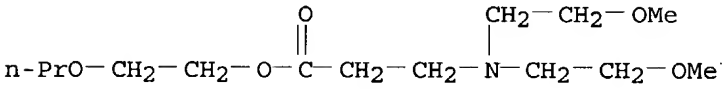
RN 473713-90-5 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



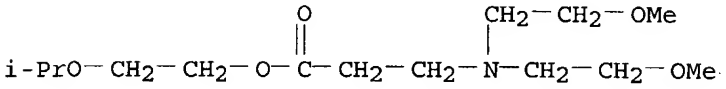
RN 473713-91-6 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-ethoxyethyl ester (9CI) (CA INDEX NAME)



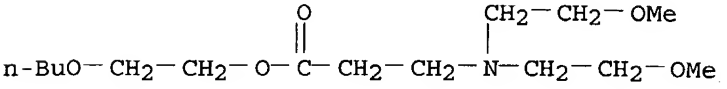
RN 473713-92-7 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-propoxyethyl ester (9CI) (CA INDEX NAME)



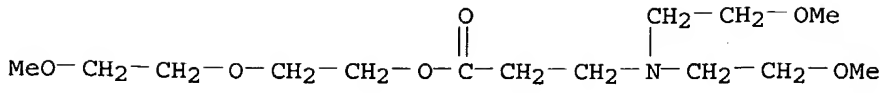
RN 473713-93-8 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-(1-methylethoxy)ethyl ester (9CI) (CA INDEX NAME)



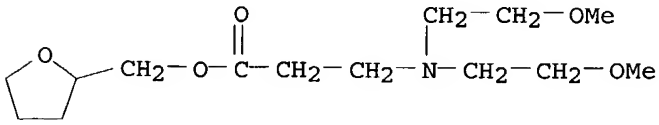
RN 473713-94-9 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-butoxyethyl ester (9CI) (CA INDEX NAME)



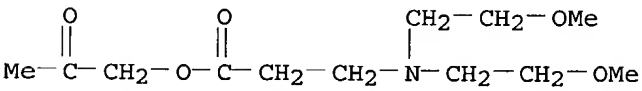
RN 473713-95-0 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-(2-methoxyethoxy)ethyl ester (9CI) (CA INDEX NAME)



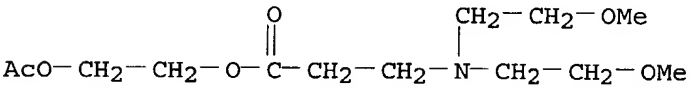
RN 473713-96-1 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, (tetrahydro-2-furanyl)methyl ester (9CI) (CA INDEX NAME)



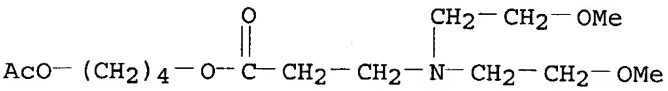
RN 473713-97-2 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-oxopropyl ester (9CI) (CA INDEX NAME)



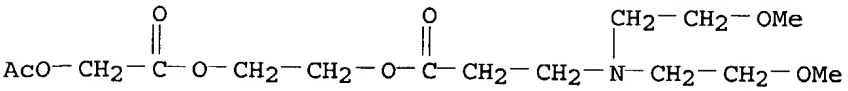
RN 473713-98-3 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-(acetyloxy)ethyl ester (9CI) (CA INDEX NAME)



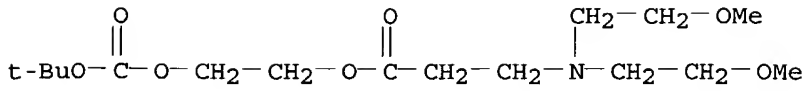
RN 473713-99-4 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 4-(acetyloxy)butyl ester (9CI) (CA INDEX NAME)



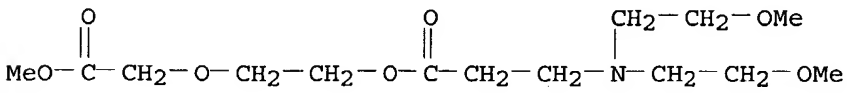
RN 473714-00-0 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-[[(acetyloxy)acetyl]oxy]ethyl ester (9CI) (CA INDEX NAME)



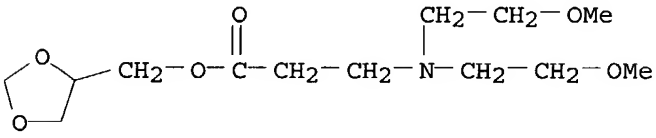
RN 473714-01-1 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-[[(1,1-dimethylethoxy)carbonyl]oxy]ethyl ester (9CI) (CA INDEX NAME)



RN 473714-02-2 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-(2-methoxy-2-oxoethoxy)ethyl ester (9CI) (CA INDEX NAME)



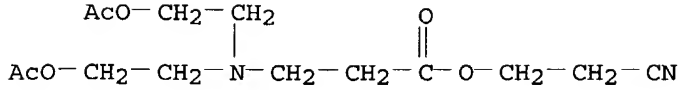
RN 473714-25-9 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 1,3-dioxolan-4-ylmethyl ester (9CI) (CA INDEX NAME)



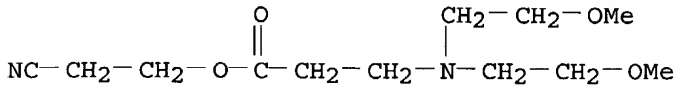
L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:638186 CAPLUS
DN 137:192762
TI Amine compounds, resist compositions and patterning process
IN Hatakeyama, Jun; Kobayashi, Tomohiro; Watanabe, Takeru
PA Shin-Etsu Chemical Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 40 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2002115018 | A1 | 20020822 | US 2001-3288 | 20011206 |
| | US 6743564 | B2 | 20040601 | | |
| | JP 2002249478 | A2 | 20020906 | JP 2001-369719 | 20011204 |
| PRAI | JP 2000-373316 | A | 20001207 | | |

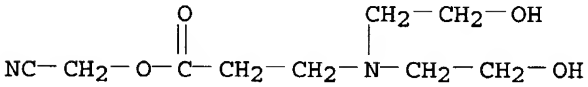
OS MARPAT 137:192762
AB Amine compds. having a cyano group are useful in resist compns. for preventing a resist film from thinning and also for enhancing the resolution and focus margin of resist. The invention amine compds. have general formulas: (R2)b-N-(R1-CN)a; I; (R2)b-N-(R1C(=O)OR4-CN)a; II (R1,4 = C1-4 alkylene; R2 = C1-20 cycloc alkyl which may contain a hydroxy group, ether, carbonyl, ester, lactone ring, carbonate, cyano group; R3 = C2-20 alkylene which may contain hydroxy, ether, thioether, carbonyl, ester, thioester group, carbonate; a = 1-3; a+b = 3).
IT **449165-74-6P 449165-79-1P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(amine compds. and **photoresist** compns. for patterning process)
RN 449165-74-6 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)



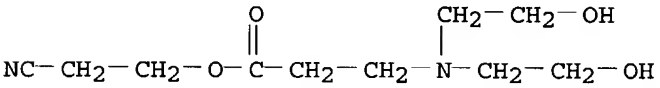
RN 449165-79-1 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)



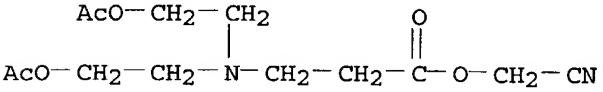
IT **449165-61-1P 449165-71-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(amine compds. and **photoresist** compns. for patterning process)
RN 449165-61-1 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, cyanomethyl ester (9CI) (CA INDEX NAME)



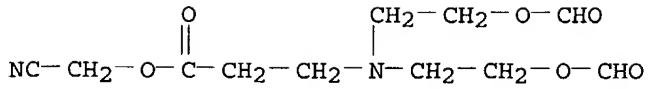
RN 449165-71-3 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)



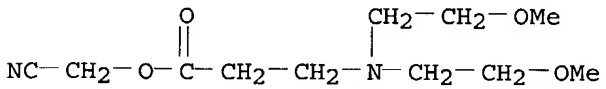
IT **449165-62-2P 449165-63-3P 449165-66-6P 449165-67-7P 449165-77-9P 449165-81-5P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(amine compds. and **photoresist** compns. for patterning process)
RN 449165-62-2 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, cyanomethyl ester (9CI) (CA INDEX NAME)



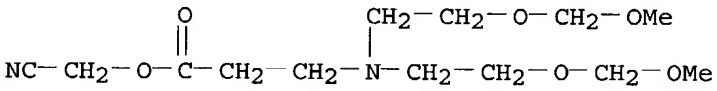
RN 449165-63-3 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, cyanomethyl ester (9CI) (CA INDEX NAME)



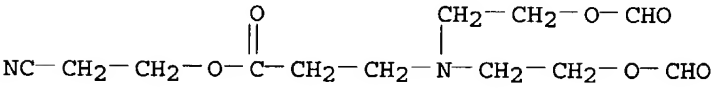
RN 449165-66-6 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, cyanomethyl ester (9CI) (CA INDEX NAME)



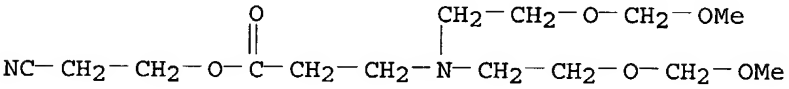
RN 449165-67-7 CAPLUS
CN β-Alanine, N,N-bis[2-(methoxymethoxy)ethyl]-, cyanomethyl ester (9CI) (CA INDEX NAME)



RN 449165-77-9 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)



RN 449165-81-5 CAPLUS
CN β-Alanine, N,N-bis[2-(methoxymethoxy)ethyl]-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)

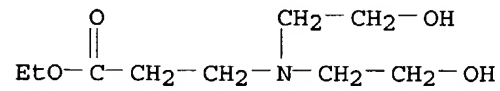


L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:523645 CAPLUS
DN 135:129564
TI Chemically amplified **resist composition** containing amine derivative having carbonyl group, ester group, or carbonate group
IN Hatakeyama, Jun; Osawa, Yoichi; Watanabe, Takeshi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

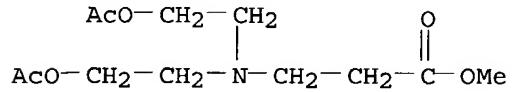
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 2001194776 | A2 | 20010719 | JP 2000-328131 | 20001027 |
| | US 6673511 | B1 | 20040106 | US 2000-697921 | 20001027 |
| | US 2004106063 | A1 | 20040603 | US 2003-615683 | 20030709 |
| PRAI | JP 1999-308496 | A | 19991029 | | |

my parent

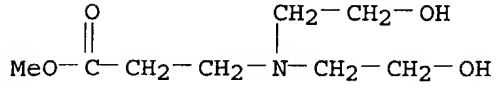
US 2000-697921 A3 20001027
OS MARPAT 135:129564
AB The chemical amplified resist composition contains amine compound N(X)n(Y)3-n (n =
1-3, integer; X = -R1-O-R2-, -R1-C(=O)-O-R61; R1 = C1-5 alkylene; R2 = C1-20 alkyl containing carbonyl or ester group; R61 = carbonyl, ester, ether, etc.; Y = H, C1-20 alkyl). The composition, which contains the aforementioned amine having carbonyl group, ester group, or carbonate group, generates little post exposure delay (PED) problem and provides the good acid diffusion control.
IT **58285-88-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(chemical amplified resist composition containing amine having carbonyl group,
ester group, or carbonate group)
RN 58285-88-4 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)



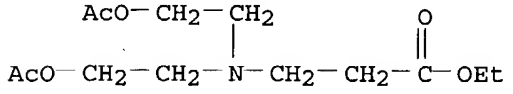
IT **117789-12-5P 118480-08-3P 350684-62-7P**
**350684-64-9P 350684-66-1P 350684-68-3P**
**350684-69-4P 350684-70-7P 350684-71-8P**
**350684-72-9P 350684-73-0P 350684-74-1P**
**350684-75-2P 350684-78-5P 350684-79-6P**
**350684-80-9P 350684-81-0P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified resist composition containing amine having carbonyl group,
ester group, or carbonate group)
RN 117789-12-5 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, methyl ester (9CI) (CA INDEX NAME)



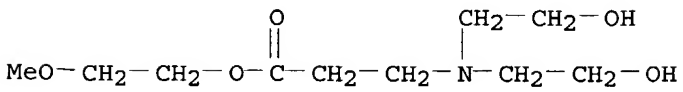
RN 118480-08-3 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, methyl ester (9CI) (CA INDEX NAME)



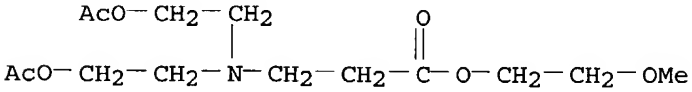
RN 350684-62-7 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



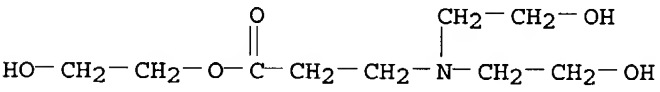
RN 350684-64-9 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



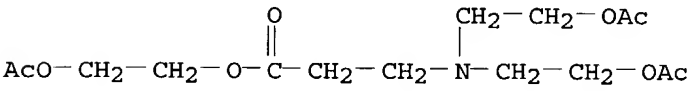
RN 350684-66-1 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



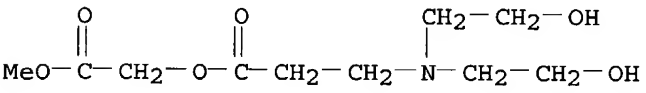
RN 350684-68-3 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)



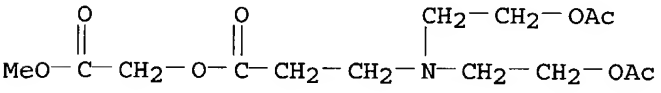
RN 350684-69-4 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-(acetyloxy)ethyl ester (9CI) (CA INDEX NAME)



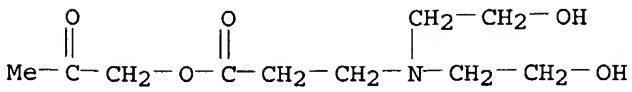
RN 350684-70-7 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 2-methoxy-2-oxoethyl ester (9CI) (CA INDEX NAME)



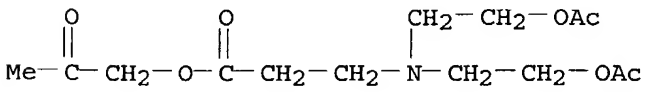
RN 350684-71-8 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-methoxy-2-oxoethyl ester (9CI) (CA INDEX NAME)



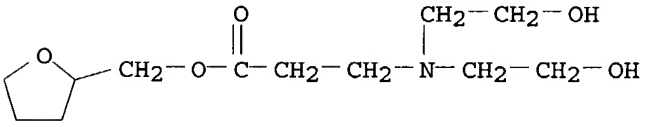
RN 350684-72-9 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 2-oxopropyl ester (9CI) (CA INDEX NAME)



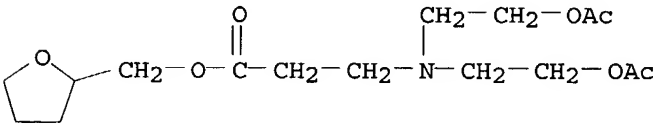
RN 350684-73-0 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, 2-oxopropyl ester (9CI) (CA INDEX NAME)



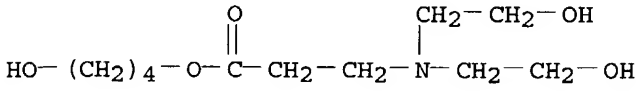
RN 350684-74-1 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, (tetrahydro-2-furanyl)methyl ester (9CI) (CA INDEX NAME)



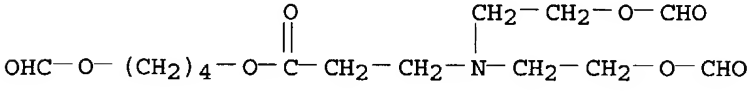
RN 350684-75-2 CAPLUS
CN β-Alanine, N,N-bis[2-(acetyloxy)ethyl]-, (tetrahydro-2-furanyl)methyl ester (9CI) (CA INDEX NAME)



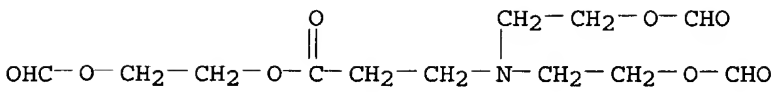
RN 350684-78-5 CAPLUS
CN β-Alanine, N,N-bis(2-hydroxyethyl)-, 4-hydroxybutyl ester (9CI) (CA INDEX NAME)



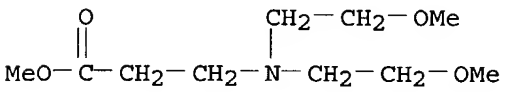
RN 350684-79-6 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, 4-(formyloxy)butyl ester (9CI) (CA INDEX NAME)



RN 350684-80-9 CAPLUS
CN β-Alanine, N,N-bis[2-(formyloxy)ethyl]-, 2-(formyloxy)ethyl ester (9CI) (CA INDEX NAME)



RN 350684-81-0 CAPLUS
CN β-Alanine, N,N-bis(2-methoxyethyl)-, methyl ester (9CI) (CA INDEX NAME)



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L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:831831 CAPLUS
DN 137:325160
TI Preparation of novel tertiary amine compounds having an ester structure as additives for chemical amplification resists
IN Watanabe, Takeru; Hasegawa, Koji; Kinsho, Takeshi; Hatakeyama, Jun
PA Shin-Etsu Chemical Co., Ltd., Japan
SO Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 1253138 | A2 | 20021030 | EP 2002-252827 | 20020423 |
| | EP 1253138 | A3 | 20030924 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2002193622 | A1 | 20021219 | US 2002-127120 | 20020422 |
| | JP 2003012621 | A2 | 20030115 | JP 2002-120468 | 20020423 |
| PRAI | JP 2001-123927 | A | 20010423 | | |

OS MARPAT 137:325160

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:523645 CAPLUS
DN 135:129564
TI Chemically amplified **resist composition** containing amine derivative having carbonyl group, ester group, or carbonate group
IN Hatakeyama, Jun; Osawa, Yoichi; Watanabe, Takeshi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 2001194776 | A2 | 20010719 | JP 2000-328131 | 20001027 |
| | US 6673511 | B1 | 20040106 | US 2000-697921 | 20001027 |
| | US 2004106063 | A1 | 20040603 | US 2003-615683 | 20030709 |
| PRAI | JP 1999-308496 | A | 19991029 | | |
| | US 2000-697921 | A3 | 20001027 | | |

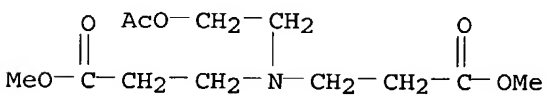
OS MARPAT 135:129564

=>

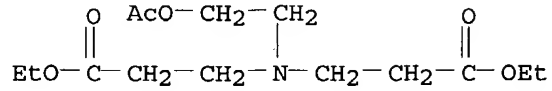
L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:831831 CAPLUS
DN 137:325160
TI Preparation of novel tertiary amine compounds having an ester structure as additives for chemical amplification resists
IN Watanabe, Takeru; Hasegawa, Koji; Kinsho, Takeshi; Hatakeyama, Jun
PA Shin-Etsu Chemical Co., Ltd., Japan
SO Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 1253138 | A2 | 20021030 | EP 2002-252827 | 20020423 |
| | EP 1253138 | A3 | 20030924 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2002193622 | A1 | 20021219 | US 2002-127120 | 20020422 |
| | JP 2003012621 | A2 | 20030115 | JP 2002-120468 | 20020423 |
| PRAI | JP 2001-123927 | A | 20010423 | | |

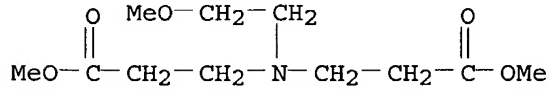
OS MARPAT 137:325160
AB The invention provides novel and useful ester group-containing tertiary amine compds. (R1OCH2CH2)nN(CH2CH2CO2R2)3-n [n is 1 or 2; R1, R2 = (cyclo)alkyl groups which may contain an ether, carbonyl or carbonyloxy group] which, when used as additives in chemical amplification photolithog., can yield photoresists having a high resolution and an excellent focus margin. Thus, a mixture of 10.5 g each Et acrylate and diethanolamine was allowed to stand 20 h at 20-30 °C, 25.6 g triethylamine, 100 mg 4-dimethylaminopyridine, 100 g THF, and 22.4 g of acetic anhydride were added and the mixture stirred for 10 h to afford 95 % (AcOCH2CH2)NCH2CH2CO2Et. The photoresists prepared by adding the ester group-containing tertiary amine compds. of the invention have a much wider focus margin, as compared with conventional photoresists.
IT **350684-82-1P 350684-83-2P 350684-85-4P**
**473714-03-3P 473714-04-4P 473714-05-5P**
**473714-06-6P 473714-07-7P 473714-08-8P**
**473714-09-9P 473714-10-2P 473714-11-3P**
**473714-12-4P 473714-13-5P 473714-14-6P**
**473714-15-7P 473714-16-8P 473714-17-9P**
**473714-18-0P 473714-19-1P 473714-20-4P**
**473714-21-5P 473714-22-6P 473714-23-7P**
**473714-24-8P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of acrylate-(di)ethanolamine adducts as additives for chemical amplification resists)
RN 350684-82-1 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



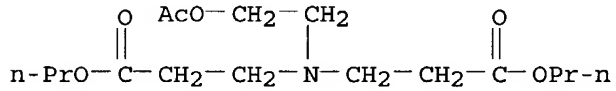
RN 350684-83-2 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)



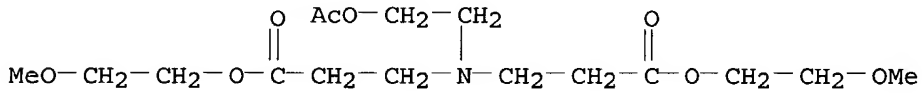
RN 350684-85-4 CAPLUS
CN β-Alanine, N-(2-methoxyethyl)-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



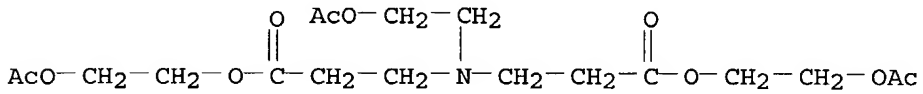
RN 473714-03-3 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-(3-oxo-3-propoxypropyl)-, propyl ester (9CI) (CA INDEX NAME)



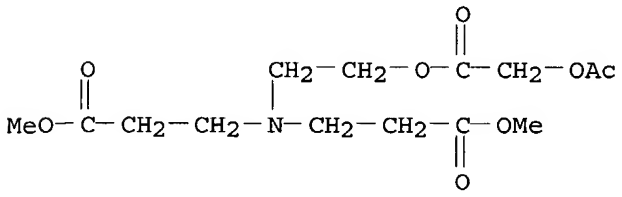
RN 473714-04-4 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-[3-(2-methoxyethoxy)-3-oxopropyl]-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



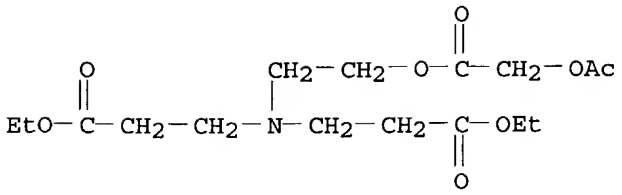
RN 473714-05-5 CAPLUS
CN β-Alanine, N-[3-[2-(acetyloxy)ethoxy]-3-oxopropyl]-N-[2-(acetyloxy)ethyl]-, 2-(acetyloxy)ethyl ester (9CI) (CA INDEX NAME)



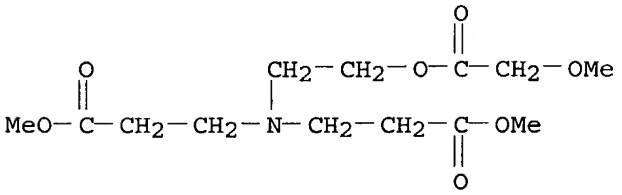
RN 473714-06-6 CAPLUS
CN β-Alanine, N-[2-[[(acetyloxy)acetyl]oxy]ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



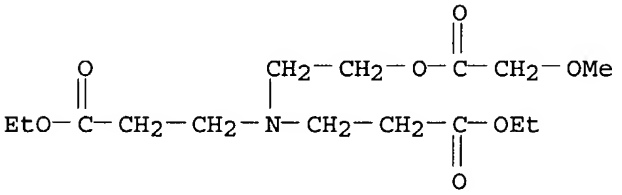
RN 473714-07-7 CAPLUS
CN β-Alanine, N-[2-[[(acetyloxy)acetyl]oxy]ethyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)



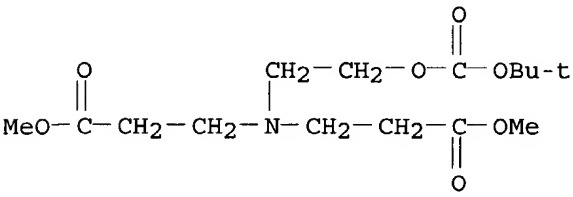
RN 473714-08-8 CAPLUS
CN β-Alanine, N-[2-[(methoxyacetyl)oxy]ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



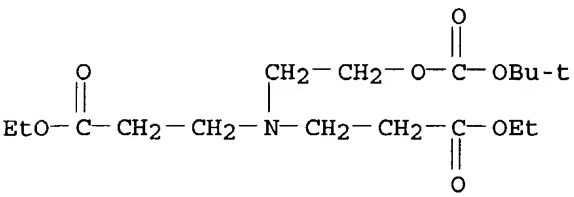
RN 473714-09-9 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-[2-[(methoxyacetyl)oxy]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



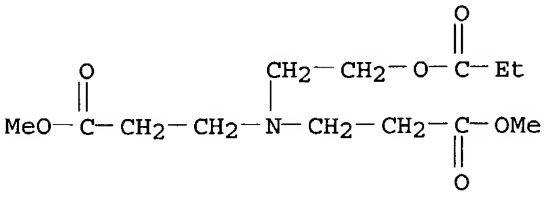
RN 473714-10-2 CAPLUS
CN β-Alanine, N-[2-[[(1,1-dimethylethoxy)carbonyl]oxy]ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



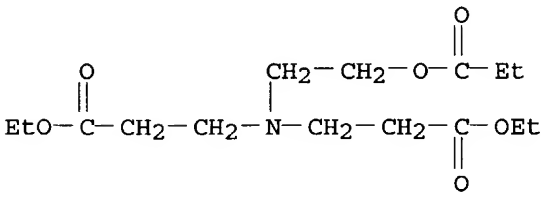
RN 473714-11-3 CAPLUS
CN β-Alanine, N-[2-[[(1,1-dimethylethoxy)carbonyl]oxy]ethyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)



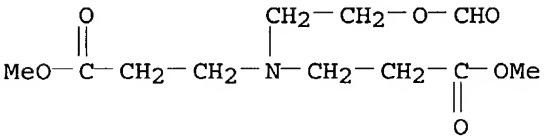
RN 473714-12-4 CAPLUS
CN β-Alanine, N-(3-methoxy-3-oxopropyl)-N-[2-(1-oxopropoxy)ethyl]-, methyl ester (9CI) (CA INDEX NAME)



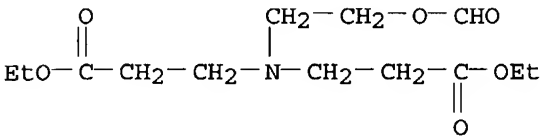
RN 473714-13-5 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-[2-(1-oxopropoxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



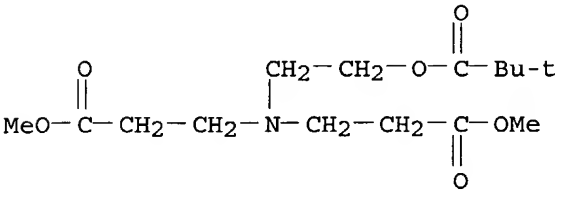
RN 473714-14-6 CAPLUS
CN β-Alanine, N-[2-(formyloxy)ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



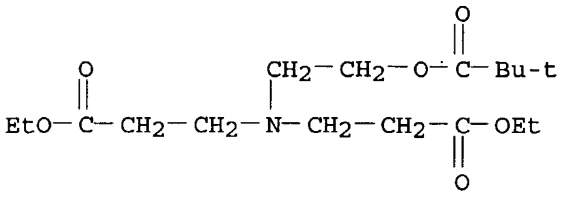
RN 473714-15-7 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-[2-(formyloxy)ethyl]-, ethyl ester (9CI) (CA INDEX NAME)



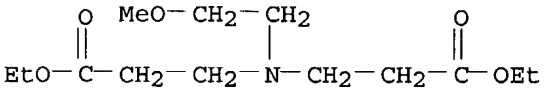
RN 473714-16-8 CAPLUS
CN β-Alanine, N-[2-(2,2-dimethyl-1-oxopropoxy)ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



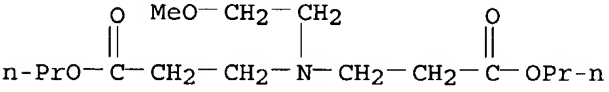
RN 473714-17-9 CAPLUS
CN β-Alanine, N-[2-(2,2-dimethyl-1-oxopropoxy)ethyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)



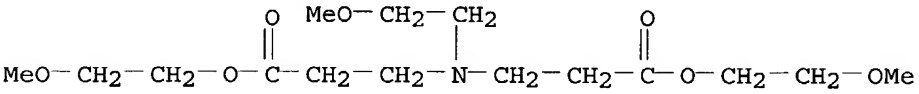
RN 473714-18-0 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-(2-methoxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)



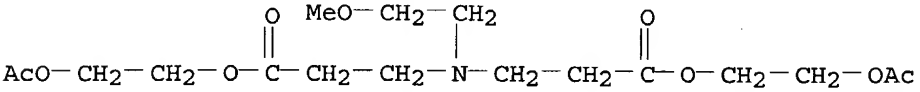
RN 473714-19-1 CAPLUS
CN β-Alanine, N-(2-methoxyethyl)-N-(3-oxo-3-propoxypropyl)-, propyl ester (9CI) (CA INDEX NAME)



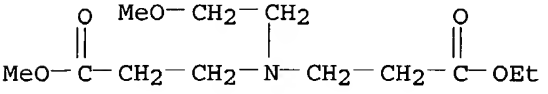
RN 473714-20-4 CAPLUS
CN β-Alanine, N-[3-(2-methoxyethoxy)-3-oxopropyl]-N-(2-methoxyethyl)-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)



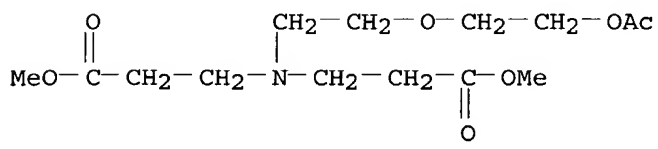
RN 473714-21-5 CAPLUS
CN β-Alanine, N-[3-[2-(acetyloxy)ethoxy]-3-oxopropyl]-N-(2-methoxyethyl)-, 2-(acetyloxy)ethyl ester (9CI) (CA INDEX NAME)



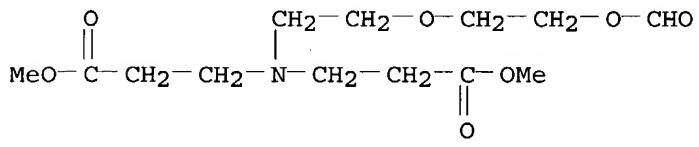
RN 473714-22-6 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-(2-methoxyethyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 473714-23-7 CAPLUS
CN β-Alanine, N-[2-[2-(acetyloxy)ethoxy]ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



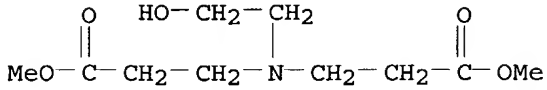
RN 473714-24-8 CAPLUS
CN β-Alanine, N-[2-[2-(formyloxy)ethoxy]ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



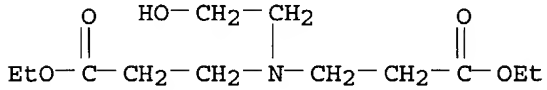
L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:523645 CAPLUS
DN 135:129564
TI Chemically amplified **resist composition** containing amine derivative having carbonyl group, ester group, or carbonate group
IN Hatakeyama, Jun; Osawa, Yoichi; Watanabe, Takeshi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 2001194776 | A2 | 20010719 | JP 2000-328131 | 20001027 |
| | US 6673511 | B1 | 20040106 | US 2000-697921 | 20001027 |
| | US 2004106063 | A1 | 20040603 | US 2003-615683 | 20030709 |
| PRAI | JP 1999-308496 | A | 19991029 | | |
| | US 2000-697921 | A3 | 20001027 | | |

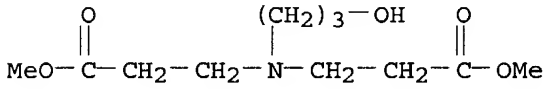
OS MARPAT 135:129564
AB The chemical amplified resist composition contains amine compound N(X)n(Y)3-n (n = 1-3, integer; X = -R1-O-R2-, -R1-C(=O)-O-R61; R1 = C1-5 alkylene; R2 = C1-20 alkyl containing carbonyl or ester group; R61 = carbonyl, ester, ether, etc.; Y = H, C1-20 alkyl). The composition, which contains the aforementioned amine having carbonyl group, ester group, or carbonate group, generates little post exposure delay (PED) problem and provides the good acid diffusion control.
IT **85997-58-6P 87278-81-7P 144576-44-3P 350684-82-1P 350684-83-2P 350684-84-3P 350684-85-4P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplified resist composition containing amine having carbonyl group, ester group, or carbonate group)
RN 85997-58-6 CAPLUS
CN β-Alanine, N-(2-hydroxyethyl)-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



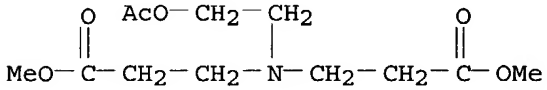
RN 87278-81-7 CAPLUS
CN β-Alanine, N-(3-ethoxy-3-oxopropyl)-N-(2-hydroxyethyl)-, ethyl ester (9CI) (CA INDEX NAME)



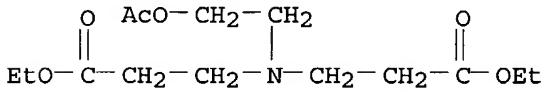
RN 144576-44-3 CAPLUS
CN β-Alanine, N-(3-hydroxypropyl)-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



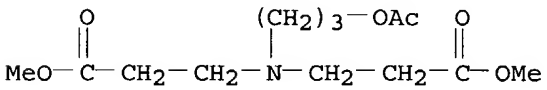
RN 350684-82-1 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



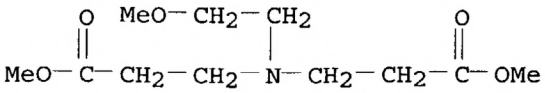
RN 350684-83-2 CAPLUS
CN β-Alanine, N-[2-(acetyloxy)ethyl]-N-(3-ethoxy-3-oxopropyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 350684-84-3 CAPLUS
CN β-Alanine, N-[3-(acetyloxy)propyl]-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 350684-85-4 CAPLUS
CN β-Alanine, N-(2-methoxyethyl)-N-(3-methoxy-3-oxopropyl)-, methyl ester (9CI) (CA INDEX NAME)



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